

REMARKS

With this Amendment, claim 15 is cancelled without prejudice or disclaimer. Therefore, claims 1, 3-14, and 16 are all the claims currently pending in this Application.

I. Claims Amendments

By this Amendment, Applicants have amended claim 1 to recite “wherein the constraint member and the plurality of beam members comprise an integrated unit, and wherein a vibrating film made of polyethylene terephthalate (PET) is attached to the integrated unit.” Claims 8 and 9 are amended in accordance with the amendment to claim 1.

The claim amendments are fully supported in the originally filed specification at least by paragraphs [0029] and [0069].

Entry of these amendments is respectfully requested.

II. Claim Rejections

Claims 1, 3-8, 10, 11, and 14-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,359,370 to Chang (hereinafter Chang) in view of U.S. Patent No. 4,140,936 to Bullock (hereinafter Bullock) and U.S. Patent No. 5,153,859 to Chatigny et al. (hereinafter Chatigny). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of Bullock, Chatigny, and U.S. Patent No. 5,856,956 to Toki (hereinafter Toki). Claims 12 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of Bullock, Chatigny, and U.S. Patent No. 6,453,050 to Ogura et al. (hereinafter Ogura). Applicants respectfully traverse.

Claim 1, as amended, recites: “wherein the constraint member and the plurality of beam members comprise an integrated unit, and wherein a vibrating film made of polyethylene

terephthalate (PET) is attached to the integrated unit.” The integration of the constraint member and the beam members and the provision of the vibrating film enables a wide frequency range, a flat frequency characteristic of sound pressure, and a high sound pressure level (see e.g. specification, paragraph [0072]). In addition, acoustic characteristics may be adjusted by changing the thickness of the film, and because of the structure, lower manufacturing cost, and a simple manufacturing process can be achieved.

Applicants respectfully submit that none of the cited references, either alone or in combination, disclose or suggest this recitation. Specifically, the cited references fail to disclose or suggest an integrated unit and an attached vibrating film. Further, there is no motivation to combine Toki with Chang.

Chang

Chang fails to disclose or suggest an integrated unit and an attached vibrating film, as recited in claim 1. With respect to claim 8, the Examiner alleges that the cruciform base 104 of Chang discloses a vibrating film. With respect to claim 1, the Examiner alleges that the cruciform base 104 discloses the constraint member and the plurality of beam members. However, claim 1 recites that the “constraint member and the plurality of beam members comprise an integrated unit” and that the vibrating film “is attached to the integrated unit”. Chang fails to disclose or suggest both an integrated unit comprising a constraint member and a plurality of beam members and a vibrating film attached thereto. Additionally, claim 1 recites that the vibrating film is made of PET, which is not disclosed or suggested in Chang.

Further, one of skill in the art would not have been motivated to modify Chang to include any vibrating film comprising PET. Chang is specifically directed to a piezoelectric actuator providing positioning freedom to an element. To that end, the piezoelectric actuator of Chang is

specifically designed to move in one or more of six degrees of motion, and hold a position.

Including a vibrating film would hinder the precise operation of Chang.

Bullock, Chatigny, and Ogura

None of Bullock, Chatigny, and Ogura remedy the above-discussed deficiencies of Chang.

Toki

With respect to claim 9, the Examiner alleges that diaphragm 42 of Toki discloses a vibrating film. Toki fails to disclose that the diaphragm 42 or any other element is made of polyethylene terephthalate (PET).

Further, contrary to the Examiner's allegations, it would not have been obvious to combine features of Toki with the device of Chang "for the benefit of [creating] a device in which the diaphragm itself need not be distorted". As noted above, Chang is directed to providing six degrees of freedom in order to position objects and does not disclose or suggest any acoustic features. Also, as noted above, modifying Chang to include any vibrating film would not have been obvious to one of skill in the art. In other words, such a modification to Chang could only be the result of impermissible hindsight reconstruction based on Applicants' own specification.

For at least the above reasons, Applicants respectfully submit that claim 1 is patentable over the cited references and that claims 3-14 and 16 are patentable at least by virtue of their dependencies. Applicants respectfully request that the prior art rejections be reconsidered and withdrawn.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Blake A. Tankersley/
Blake A. Tankersley
Registration No. 59,238

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 25, 2009